UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,290	08/01/2003	Aman Gupta	GEMS8081.168	3334

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EXAMINER
TIMBLIN, ROBERT M

ART UNIT	PAPER NUMBER
2167	

NOTIFICATION DATE	DELIVERY MODE
09/06/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

		Application No.	**Applicant(s)**
Office Action Summary		10/633,290	GUPTA ET AL.
		Examiner	**Art Unit**	
		Robert M. Timblin	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 August 2007</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>22-39</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>22-39</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This action corresponds to application 10/633,290 filed 8/1/2003. Claims 22-39 are

pending.

Claim Objections

Claim 33 is objected to because of the following informalities: the phrase "each order"

lacks antecedent basis. As interpreted herein, "each order" is construed as "each order scheduled

for production" as to be consistent with independent claims 22, and 26. Appropriate correction

is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
requirements of this title.

Claims 33-37 remain rejected under 35 USC 101 because they purport to claiming

computer signals, which do not belong to any of the 4 enumerated statutory classes of

invention. In response to Applicant's arguments submitted 8/2/2007 (pg. 6-7):

Claim 33 covers a carrier signal itself rather than a tangible, physical article or

object, which may include the signal. Claim 33 covers embodiments which are a form of

energy (e.g., radiation, waves and signals) and which are not structurally and functionally

interconnected with the instructions carried thereby in a manner which enables the

instructions to act as a computer component and realize their functionality. Hence, the claim is not limited to embodiments which fall within a statutory category of invention and are rejected under 35 USC 101. Furthermore, as a signal per se does not realize functionality in a computer, the practical application requirement is not satisfied (i.e. no result is produced if there is lacking the requisite functionality of a computer).

These claims are not statutory because claims that recite nothing but the physical characteristics of a form of energy such as frequency, voltage, or the strength of a magnetic field, defined energy or magnetism, per se and as such are nonstatutory natural phenomena. O'Reilly 56 U.S. at 112-114. Moreover it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in 35 USC section 101.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 22, 24-31, 33, and 36-39 are rejected under 35 U.S.C. 102(e) as being anticipated by **Kennedy et al.** ('Kennedy' hereinafter) (U.S. Patent 6,963,847 B1). In the following citations and drawing references, Kennedy teaches:

With respect to claim 22, An automated method for visually displaying product production information and notifications in real-time comprising:

automatically querying (col. 20, line 51) a database (drawing reference 14, 16) for production data (abstract, col. 1 line 47, and col. 31 line 11) for each order (abstract, i.e. line items/component ATP requests) scheduled for production (abstract, col. 1 line 47, and col. 31 line 11)that includes a product category (col. 12, line 44 and col. 17, line 15-44; i.e. wheels and categories of axles) of each order (abstract, i.e. line items/component ATP requests), a promised shipping date (col. 26, lines 12 and 41) for each order (abstract, i.e. line items/component ATP requests), a requested shipping date (col. 13 line 39-41) for each order, and an expected sales revenue (col. 17, line 4-44, and col. 21 line 41-42) for each order (abstract, i.e. line items/component ATP requests), by a seller (drawing reference 16, 14 and col. 7 line 64-67) in real-time (col. 7-8, line 64-8, respectively);

for each order (abstract, i.e. line items/component ATP requests), automatically comparing the promised shipping date and the projected shipping date (col. 18 line 24-31);

for each order (abstract, i.e. line items/component ATP requests), automatically generating a proactive alert (col. 31 line 34-40, col. 33 line 33-40) if the projected shipping date is later than the promised shipping date (col. 18, line 54-60);

automatically determining a shipment quality metric (col. 14 line 54-59, and col. 33 line 49-55) for all orders that have shipped (col. 18 line 45-63); and

automatically displaying the proactive alert (col. 31 line 34-40, col. 33 line 33-40) for each order (abstract, i.e. line items/component ATP requests), the number of orders (col. 12 line 38-39) for each product category (co. 17 line 34-44), the expected revenue (col. 17, line 4-44,

and col. 21 line 41-42) for each order and the shipment quality metric in a tabular format (drawing reference 36 and col. 5 line 34-26) on a user viewable medium (drawing reference 12).

With respect to claim 24, the method of claim 22 further comprising creating a plurality of display forms, wherein each display form depends on a number of days before the product is available (col. 17, line 15-20, col. 23 line 15-20 and col. 29 line 10-16).

With respect to claim 25, the method of claim 22 further comprising:

determining an acceptance range (col. 17 line 50-64); and

displaying a percentage of times the shipment quality metric is outside the acceptance range (col. 17 line 55-65).

With respect to claim 26, A computer-readable medium having stored thereon one or more computer programs that, when executed by one or more computers, causes the one or more computers to:

query (col. 20, line 51) a database (drawing reference 14, 16) for production data (abstract) for each order (abstract, i.e. line items/component ATP requests) scheduled for production (abstract) that includes a product category (col. 12, line 44 and col. 17, line 15-44; i.e. wheels and categories of axles) of each order (abstract, i.e. line items/component ATP requests), a promised shipping date (col. 26, lines 12 and 41) for each order (abstract, i.e. line items/component ATP requests), a requested shipping date (col. 13 line 39-41) for each order, and an expected sales revenue (col. 17, line 4-44, and col. 21 line 41-42) for each order (abstract,

i.e. line items/component ATP requests), by a seller (drawing reference 16, 14 and col. 7 line 64-67) in real-time (col. 7-8, line 64-8, respectively);

create a sum of orders for all orders in a determined period of time (col. 17 line 30-44;

create a sum of revenue for the sum of orders (col. 3 line 33-40);

create a proactive alert (col. 31 line 34-40, col. 33 line 33-40) if the number of days before the product is available is later than the promised shipping date for each order (col. 18, line 54-60);

determine a shipment quality metric (col. 14 line 54-59, and col. 33 line 49-55) for shipped orders (col. 18 line 45-63); and

display the sum of products in production (col. 17; e.g. sum of wheels), the sum of products in production for each product category (col. 17 line 15-45; e.g. wheels and axel categories), the sum of projected revenue for each product in production (col. 17 lines 34-44; e.g. the calculated revenue for each line item), the proactive alert (col. 31 line 34-40, col. 33 line 33-40) for each order (abstract, i.e. line items/component ATP requests), and the shipment quality metric (col. 14 line 54-59, and col. 33 line 49-55) in a tabular format (i.e. unified multidimensional quotation 36) on a user viewable medium (drawing reference 12).

With respect to claim 27, the computer-readable medium of claim 26 wherein the one or more programs further causes the one or more computers to:

query the database (drawing reference 14, 16) for saleable products in inventory (abstract, col. 16, line 45); and

determine a date each saleable product is available for shipment (col. 21 line 25-27).

With respect to claim 28, the computer-readable medium of claim 27 wherein the one or

more computers to:

determine a number of days between a current date and the date each saleable product is

available for shipment (col. 17 line 30-44); and

display a user-defined message (col. 18 line 55-60) for each determined number of days

(col. 17 line 15-30 and col. 18 line 54-60).

With respect to claim 29, the computer-readable medium of claim 28 wherein a first

message (col. 18 line 57) is displayed if the number of days before the product is available is

greater than a user-defined number (col. 10 line 44-45) and a second message (col. 21 line 8-11)

is displayed if the number of days before the product is available is less than a user-defined

number (col. 10 line 44-45).

With respect to claim 30, the computer-readable medium of claim 26 wherein the

shipment quality metric is processed to provide a statistical measure of process capability (col.

178 line 55-60, col. 25 line 17-31).

With respect to claim 31, the computer-readable medium of claim 26 wherein the

shipment quality metrics are regularly re-processed (col. 32 line 25-35).

With respect to claim 33, A computer data signal representing a sequence of instructions

that, when executed by one or more processors, cause the one or more processors to:

query (col. 20, line 51) and update (col. 11 line 60 and figure 5) a database (drawing

reference 14, 16) containing product production data (col. 20 line 45-55);

periodically (col. 30 line 39-57) obtain from the database (drawing reference 14, 16) a

product category (col. 12, line 44 and col. 17, line 15-44; i.e. wheels and categories of axles) of

each order (abstract, i.e. line items/component ATP requests), a promised shipping date (col. 26,

lines 12 and 41) for each order (abstract, i.e. line items/component ATP requests), a projected

shipping date (col. 17 line 21-22 and col. 21 line 26-27), for each order (abstract, i.e. line

items/component ATP requests), and a projected revenue (col. 17, line 4-44, and col. 21 line 41-

42) for each order (abstract, i.e. line items/component ATP requests);

calculate a difference between the promised shipping date and the requested shipping

date for each order (col. 12, line 44 and col. 17, line 15-44; i.e. wheels and categories of axles);

calculate a total revenue for each product in production for each product

category (col. 17, line 4-44); and

display in a table (drawing reference 36 and col. 5 line 34-26), the number of days before

the product is available (col. 17 line 21-44), the total revenue (col. 17, line 4-44, and col. 21 line

41-42) for each product in production for each product category (col. 17 line 33-44), and a

proactive alert (col. 31 line 34-40, col. 33 line 33-40) for each order (abstract, i.e. line

items/component ATP requests) if the projected shipping date (col. 17 line 21-22 and col. 21 line

26-27) for each order is later than the promised shipping date (col. 18, line 54-60).

With respect to claim 36, the computer data signal of claim 33 wherein the one or more

processors is caused to obtain data every time information is requested (figures 2-5).

With respect to claim 37, the computer data signal of claim 33 wherein the table that the data is displayed in comprises a plurality of display forms, wherein each display form depends on the number of days before the product is available (col. 17 line 15-45, col. 18 line 50-60).

With respect to claim 38, the method of claim 22 further comprising:

for each order, automatically generating another proactive alert if the request date is within a preset number of days from a current date (col. 17 line 4-44); and

automatically displaying generated proactive alerts in a tabular format on the user viewable medium (col. 21 line 5-11).

With respect to claim 39, the method of claim 38 further comprising automatically generating the another proactive alert if the request date is within two days from the current date (col. 18 line 55-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 23, 32, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy as applied to claims 22, 24-31, 33, and 36-39 above, in view of Davis, Robert D et al.;

"Detecting Process Shifts with X-bar charts; First Quarter 1993, Production and Inventory

Management Journal, 34, 1, ABI/INFORM Global, p.25-31 ("Davis" hereafter).

With respect to claim 23 and similar claim 32, Kennedy fails to teach wherein the

shipment quality metric is calculated by a formula:

$$Z_{LT} = \min\left[\frac{USL - \mu}{\sigma}, \frac{\mu - LSL}{\sigma}\right].$$

where USL is a preset upper specification limit, LSL is a preset lower specification limit,

μ is a mean, and σ is a standard deviation.

Davis, however teaches this formula (i.e. figure 1, page 26, steps 4-5 on page 27, and step

1 of page 29) for determining process quality and a percentage of non conforming product.

Davis further teaches that a process may shift its center point so that the bulk of the process

observations are not centered exactly between the USL and LSL but are shifted (see Figure 1, b,

and d). Davis notes that this shift can occur both based on a change in (process variation and a

change in (process average. Since Davis teaches that process shifts can drive the tail of the

distribution over either the LSL or USL and that the Z statistic measures the percentage of

nonconforming material, it would be obvious to take the minimum Z statistic of either the USL

or LSL, because it is old and well known in the art of six-sigma that a smaller Z stat means that a

more defective product is being produced.

In the same field of endeavor, (i.e. determining process capability), it would have been

obvious to one of ordinary skill in the data processing art at the time of the present invention to

combine the teachings of the cited references because Davis would have given Kennedy a metric to measure shipment quality with the benefit of maximizing order fulfillment.

Claim 32, for containing essentially the same subject matter is similarly rejected with the same rationale of the rejection of claim 23.

With respect to claim 34, Kennedy fails to teach the computer data signal of claim 33 wherein the one or more processors are further caused to determine a quality metric for each category and display the quality metric in the table.

Davis, however, teaches wherein the one or more processors are further caused to determine a quality metric for each category and display the quality metric in the table. That is, Davis teaches determining a quality metric (page 25, col.1 paragraph 1; i.e. a quality characteristic described by a measured value) to monitor product conformity.

In the same field of endeavor, (i.e. determining process capability and product availability), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the quality metric of Davis would have given Kennedy a way to monitor product conformity to determine product availability in order to maximize order fulfillment.

With respect to claim 35, Kennedy fails to teach the computer data signal of claim 34 wherein the quality metric is a statistical value calculated and displayed is a projected defect in parts per million.

In the same field of endeavor, (i.e. determining process capability), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to

combine the teachings of the cited references because Davis would have given Kennedy a metric

to measure shipment quality with the benefit of maximizing order fulfillment.

Davis, however, teaches the computer data signal of claim 34 wherein the quality metric

is a statistical value calculated and displayed is a projected defect in parts per million (i.e. step 4

of page 29) to find the percentage of non conforming product.

Response to Arguments

Applicant's arguments, see pages 7-10, filed 8/2/2007, with respect to the rejection(s) of

claim(s) 22-39 under 103 (a) have been fully considered and are persuasive. Therefore, the

rejection has been withdrawn. However, upon further consideration, a new ground(s) of

rejection is made in view of a different interpretation of the Kennedy reference and the newly

found Davis reference.

Applicant argues on page 7 that Kennedy does not teach each order for *scheduled for*

production. The Examiner respectfully disagrees as Kennedy clearly teaches orders scheduled

for production (abstract, col. 1 line 47, and col. 31 line 11). Specifically, Kennedy teaches

monitoring production plans of ATP requests (i.e. orders) throughout production logistics until

order fulfillment.

Applicant further argues on page 8 that Kennedy does not teach a shipment quality metric

for all orders that have shipped. The Examiner respectfully disagrees because on the contrary,

Kennedy teaches in fulfilling the process (in other words, completing the order), *shipment*

confirmations are sent with a status, for example, of being *fully shipped*. In the endeavor of

ensuring order fulfillment, Kennedy clearly suggests that once an order is fulfilled, that a status of fully shipped clearly suggests that the order has been shipped. Other delivery details taught by Kennedy are partial, cancel, ship on-time, etc. These delivery details further teach and suggest a shipment quality metric because they describe the quality of the shipment process of each product order. Furthermore, and inherently, a fully shipped order would contain a higher shipment quality metric than a partially shipped order.

Applicant then argues on page 9 that Kennedy does not teach periodically obtaining, from a database containing product production data, a projected revenue for each order. The Examiner respectfully disagrees as Kennedy teaches periodically (col. 30 line 39-57) obtain from the database (drawing reference 14, 16) a projected revenue (col. 17, line 4-44, and col. 21 line 41-42) for each order (abstract, i.e. line items/component ATP requests).

Specifically, Queued ATP requests are periodically obtained for re-quoting to improve the quotation result. In other words, the quote is queued (i.e. suggesting stored in a database). The quote is then periodically submitted (i.e. periodically obtained for re-quoting). Furthermore, Kennedy teaches a projected revenue as a quote that contains the cost (i.e. revenue gained) of each line item depending on the date of the ordered line item. For example, Kennedy shows a projected revenue (i.e. the calculation in $()) for items ordered from a range of May 9 to May 12 (col. 17 line 33-44).

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Davis, Robert D; et al.; "Detecting Process Shifts with X-Bar Charts", First Quarter 1993,

Production and Inventory Management Journal, 34, 1, ABI/INFORM Global, p.25-31. The

subject matter disclosed therein pertains to the pending claims (i.e. process capability).
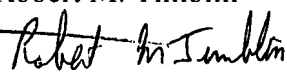
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627.

The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.·

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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8/22/2007